Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A correlation method comprising the steps of:

sampling a received ~~receiving a~~ composite signal ~~sequence~~ comprising transmissions from a plurality of source devices to generate a plurality of original samples in a first order;

reordering the original samples in the composite signal into a second predetermined order that is different from the first order ~~generating a re-ordered composite signal sequence based upon a predetermined order by directly applying a reordering function to the received composite signal sequence~~; and

~~directly~~ performing a transform on the re-ordered original samples ~~composite signal sequence~~.

2. (currently amended) The method of claim 1 wherein the transform is selected from a group comprising ~~consisting of~~: Fast Hadamard Transform (FHT), Fast Walsh Transforms, and Fast Walsh-Hadamard Transform.

3. (currently amended) The method of claim 1 wherein the received composite signal ~~sequence~~ comprises at least one m-sequence.

4. (currently amended) The method of claim 3 wherein the second predetermined order is based directly on a ~~generator polynomial of at least one m-sequence~~ linear feedback shift register output state sequence.

5. (currently amended) The method of claim 1 wherein the received composite signal ~~sequence~~ comprises at least one specially augmented m-sequence.

6. (currently amended) The method of claim 5 wherein the second predetermined order is based on a generator polynomial of at least one specially augmented m-sequence.

7. (currently amended) The method of claim 1 wherein a dimension of the transform is equal to or less than ~~equivalent to~~ a number of available channels.

8. (original) The method of claim 1 wherein a dimension of the transform is different than a number of available channels.

9. (currently amended) A device comprising:

a receiver for receiving original samples ~~elements~~ of a composite signal ~~sequence~~ comprising transmissions from a plurality of source devices;

a linear feedback shift register state machine ~~generator~~ for generating a sequence of addresses to address a storage medium ~~translate between a pseudonoise sequence and a Walsh sequence, the sequence of addresses corresponding to a reordered composite signal sequence generated by directly applying a reordering function to the received composite signal sequence~~;

a storage medium, coupled to the receiver and the state machine ~~generator~~, for storing each of the original samples of the composite signal ~~element of the reordered composite signal sequence~~ at a given address according to the sequence of addresses; and

a processor, coupled to the storage medium, for directly performing a transform on at least a portion of the original samples ~~elements of the reordered composite signal sequence~~ stored in the storage medium.

10. (currently amended) The device of claim 9 wherein the state machine ~~generator~~ comprises a linear feedback shift register.

11. (original) The device of claim 10 wherein the linear feedback shift register is a Fibonacci sequence generator.

12. (currently amended) The device of claim 9 wherein the state machine ~~generator~~ is a second storage medium.

13. (currently amended) The device of claim 9 wherein the linear feedback shift register state machine generates ~~the pseudonoise sequence is~~ a specially augmented m-sequence.

14. (cancelled)

15. (currently amended) The device of claim 9 wherein the transform is selected from a group comprising ~~consisting of~~: Fast Hadamard Transform (FHT), Fast Walsh Transforms, and Fast Walsh-Hadamard Transform.

16. (original) The device of claim 9 wherein the receiver comprises an analog-to-digital converter.

17. (currently amended) The method of Claim 1, wherein the received composite signal ~~sequence~~ comprises only quasi-orthogonal sequences.

18. (new) The device of Claim 1, wherein a transmission channel mask value is directly determined by index output values of the transform.